

Notice of Allowability

Application No.

10/826,511

Examiner

Richard M. Lorence

Applicant(s)

ARNOLD ET AL.

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application papers filed on April 16, 2004.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 4/16/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In line 3 on page 3 "illustrates" has been changed to - - illustrate a - -.

In line 2 of claim 13 "comprised" has been changed to - - comprises - -.

In line 1 of claim 18 "the input rotation" has been deleted.

In line 2 of claim 18 "wherein first" has been changed to - - wherein the first - -.

The following is an examiner's statement of reasons for allowance:

None of the prior art of record shows or suggests a variable speed clutch including a source coupler, a first input drive, a second input drive, an output shaft, a first input hub, a second input hub, an output hub, a wrap spring, a control hub and a control motor arranged together in the manner set forth in claim 1, and particularly wherein the first input hub is coupled to the first input drive and configured to rotate about the output shaft in a first direction, the second input hub is coupled to the second input drive and configured to rotate about the output shaft in a second direction opposite the first direction, the motor is configured to alternatively rotate the control hub, and

rotation of the control hub in the second direction causes the wrap spring to wrap open thereby engaging the second input hub and rotation of the control hub in the first direction causes the wrap spring to wrap down thereby engaging the first input hub.

Nor does the prior art of record show or suggest a variable speed clutch including an output shaft, an input rotation source, a first input hub, a second input hub, an output hub, a wrap spring and a control hub arranged together in the manner set forth in claim 12, and particularly wherein the first input hub is coupled to the input rotation source and configured to rotate about the output shaft in a first direction, the second input hub is coupled to the input rotation source and configured to rotate about the output shaft in a second direction opposite the first direction, the control hub is configured to alternatively rotate, rotation of the control hub in the second direction causes the wrap spring to wrap open thereby engaging the second input hub, rotation of the control hub in the first direction causes the wrap spring to wrap down thereby engaging the first input hub, and further wherein the speed of rotation of the control hub in the second direction is variably controllable such that the speed of rotation of the output shaft varies from stationary to the speed of rotation of the input rotation source, and the speed of rotation of the control hub in the first direction is variably controllable such that the speed of rotation of the output shaft varies from stationary to the speed of rotation of the input rotation source.

Nor does the prior art of record show or suggest a variable speed clutch including an output shaft, first and second input rotation sources, a first input hub, a second input

hub, an output hub, a wrap spring and the specified means coupled to the second end of the wrap spring arranged together in the manner set forth in claim 19, and particularly wherein the first input hub is coupled to the first input rotation source and configured to rotate about the output shaft in a first direction, the second input hub is coupled to the second input rotation source and configured to rotate about the output shaft in a second direction opposite the first direction, and the means coupled to the second end of the wrap spring alternatively causes the wrap spring to wrap open a variable amount thereby engaging the second input hub by a variable amount, and causes the wrap spring to wrap down a variable amount thereby engaging the first input hub by a variable amount.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Drawings

The drawings filed on April 16, 2004 are acceptable.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on April 16, 2004 has been considered by the examiner.


Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nishimura '793, Arcaro '716 and Cox '909 each show torque transmitting devices including a wrap spring clutch.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard M. Lorence whose telephone number is (571) 272-7094. The examiner can normally be reached on Mondays through Fridays from 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Richard M. Lorence
Primary Examiner
Art Unit 3681

Lorence/rml